Patrick H. Merrick, Esq.
Director – Regulatory Affairs
AT&T Federal Government Affairs

Suite 1000
1120 20th Street NW
Washington DC 20036
202 457 3815
FAX 202 457 3110

May 8, 2002

Via Electronic Filing

Mr. William Caton, Acting Secretary
Federal Communications Commission
445 Twelfth Street, S.W., Room TW-B204
Washington, DC 20554

Re: Notice of Ex Parte Presentation: AT&T Corp. v. Sprint Spectrum, d/b/a Sprint PCS, WT Docket No. 01-316.

Dear Mr. Caton:

This letter responds to an informal request for information received by AT&T from the Staff regarding AT&T's ability to block the traffic that is the subject of AT&T's dispute with Sprint PCS in this proceeding.

There are two categories of traffic exchanged by AT&T and Sprint PCS: (1) 8YY calls placed by Sprint PCS users and terminated by AT&T to its 8YY customers ("8YY calls"); and (2) long distance calls placed by AT&T to Sprint PCS customers ("terminating calls"). We will address each in turn:

8YY Calls

The answer with respect to 8YY calls is relatively straight-forward. As set forth more fully in the attached affidavit of Michael T. Bauer that AT&T submitted in another proceeding, "AT&T has no ability whatsoever to block 1-8YY calling as a class based on the originating phone number (let alone the identity of the carrier serving that originating phone number)." Affidavit of T. Michael Bauer, ¶ 37, *U.S. Telepacific Corp.* v. *AT&T Corp.*, File No. EB-00-MD-010 (filed September 15, 2000). Mr. Bauer estimated that it would take AT&T's vendors at least two years to develop the modifications necessary to block such calls, and would cost AT&T between 25 and 35 million dollars to do so. *Id*, ¶ 44. By contrast, as set forth more fully in the attached affidavit of Sekar Ganesan in that same proceeding, it is relatively simple for the operator of the switch that performs the 8YY database querries to program the switch not to route calls to AT&T.

Terminating Calls

With respect to terminating calls the answer is not as simple. Today, Sprint PCS acquires its number assignments in 10,000 number blocks. Furthermore, as of today, wireless numbers are

not portable – that is, a particular number assigned today to Sprint PCS will not be assigned to another carrier if the customer changes carriers. Based on those assumptions, AT&T could today block terminating calls to Sprint PCS by modifying its routing tables to route all calls placed to Sprint PCS's NPA-NXX assignments to a message informing callers that AT&T does not interconnect with Sprint PCS. Although AT&T had the technical ability to block calls to Sprint PCS in the past, AT&T relied on the industry practice of bill and keep in choosing not to block such traffic.

By contrast, beginning this November AT&T will no longer have the technical ability to block calls to Sprint PCS. Effective November 24, 2002 the Commission's orders require that all local carriers (including wireless carriers) engage in "number pooling" -- *i.e.*, that 10,000 number blocks be subdivided and assigned to carriers on a 1,000 block basis (*e.g.*., 913-555-1XXX would belong to Sprint PCS but 913-555-2XXX would be assigned to SouthWestern Bell). In addition, as of that same date wireless carriers will also be required for the first time to implement number portability. If *either* of these changes is implemented, AT&T would no longer have the technical ability to block calls to Sprint PCS.

1. Number Pooling. AT&T's long distance switches and associated databases and routing tables, like those of other IXCs, have been developed and deployed to make physical routing determinations based on six-digit routing (*i.e.* NPA-NXXs). Routing determinations below that level (e.g., at the 7 or 10 digit level) are made by the LECs that operate the local or tandem switches at which AT&T hands off its traffic for termination. AT&T today lacks the ability to make routing decisions, including blocking calls, based on the seventh digit (*i.e.*, at the 1,000 number block level). Modifying AT&T's network to enable routing based on the seventh digit, thereby allowing AT&T to selectively block calls to Sprint PCS after implementation of number pooling, would require a significant overhaul in AT&T's switches, databases, and associated equipment and functions, and would involve cooperation of AT&T's equipment vendors. Although AT&T has not had a chance to study the issue carefully, AT&T's engineers believe that such a modification would take between 18 months and two years to implement, and cost millions of dollars. By contrast, as admitted by Sprint PCS in its May 6, 2002 *ex parte*, the ILEC tandem operators could block these calls if requested to do so by Sprint PCS.

2. Number Portability. Implementation of number portability by wireless carriers, currently mandated for November 24, 2002, will add a different level of complexity to this issue. Once number portability is implemented in the wireless environment, AT&T would no longer be able to rely on initial number assignments to block calls, because numbers would cease to uniquely identify carriers. As addressed at length in Mr. Bauer's affidavit, AT&T would need to make substantial modifications to its network to block terminating traffic on a carrier-specific basis in a number-portability environment. Bauer Aff., ¶¶ 46-51. Based on cost estimates that are now two-years old (and hence are likely to be too low), Mr. Bauer estimated that it would cost AT&T between $ 3 and $ 6 million to develop and deploy the necessary network modifications, and an additional $ 1million a year to administer and implement the modifications. Bauer Aff., ¶ 51. Assuming sufficient cooperation from AT&T's vendors, AT&T believes it would take approximately 18 months to implement these changes. Once again, however, "the ILEC tandem provider is capable today, without development work" of blocking incoming AT&T traffic from routing to Sprint PCS's trunks. Bauer Aff., ¶ 50.

Even if AT&T had the technical ability to block Sprint PCS traffic, however, that capability would not allow the Commission to avoid regulating the level of Sprint PCS's access charges in the event that the Commission were to conclude that Sprint PCS is entitled to impose access charges on IXCs. As the D.C. Circuit held in *Illinois Public Tel. Ass'n v. FCC*, 117 F.3d 555, 564 (D.C. Cir. 1997), the ability of an IXC to block calls is not an adequate substitute for the

establishment of just and reasonable rates by the Commission. In that case, the Commission argued that its failure to establish a just and reasonable default rate for 800 and access code calls from payphones was not reversible error because IXCs would still "be able to 'block' calls from over-priced payphones and, therefore, will be able to negotiate lower rates if the [default] rates are too high." *Id.* The Court of Appeals squarely rejected that argument. While recognizing that "the IXCs' potential to block calls gives them some leverage to negotiate," the Court held that, "the mere possibility that the default rate *might* be adjusted by negotiation" was not an adequate substitute for the setting of a just and reasonable default rate by the Commission. *Id.* Among other things, the Court noted that because blocking would be "immensely . . . expensive" and "its use invariably will result in a mutual loss of business" for all parties, "at a minimum, the IXCs are entitled to a default rate that is reasonably justified, so they are not forced to resort to blocking." *Id.* Thus, if the Commission were to allow Sprint PCS to charge IXCs for access it would have no choice but to regulate the level of those charges.

Consistent with the Commission rules, I am filing one electronic copy of this notice and request that you place it in the record of the proceedings.

Sincerely,

Attachments

cc: Tamara Preiss
Jared Carlson

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
U.S. TelePacific Corp.,	)	
	)	
Complainant,	)	
	)	**File No. EB-00-MD-010**
v.	)	
	)	
AT&T Corp.	)	
	)	
Defendant.	)	

AFFIDAVIT OF T. MICHAEL BAUER

1. My name is T. Michael Bauer. My business address is 200 Laurel Avenue, Room D2, 2B10, in Middletown, New Jersey. I am the Technical Manager for Prepaid Service Realization District, AT&T Consumer Services. Between 1977 and 1984, I worked as a member of the technical staff at the Operator Services and Digital Switching Laboratory of the Bell Telephone Laboratories. Since that time I have been employed by AT&T in developing, managing, planning and evaluating systems for switching and processing calls, especially operator, credit card, and prepaid calls. I hold a Masters degree in Telecommunications, a Bachelors degree in Chemical Engineering, and a Ph.D. in Psychology. I have been awarded three telephony-related patents, and have four more telephony-related patents pending. I have published articles in *Telephony* and in the *Bell Laboratories Record.* I have personal knowledge with respect to the ability of AT&T's network to block originating and terminating traffic on a CLEC-specific basis.

I. Purpose and Summary of Affidavit

2. This affidavit is submitted on behalf of AT&T in response to the Commission's request for affidavits addressing the question as to who should block the traffic flow between a CLEC and an IXC where the IXC has not ordered access services from the CLEC or has cancelled an existing order. The purpose of this affidavit is to address the ability of AT&T's network to block originating and terminating traffic on a CLEC-specific basis. For the reasons discussed below, AT&T's network today cannot block traffic that is either originated by a CLEC and routed through a tandem switch to AT&T's network or that is to be delivered to a CLEC for termination through an ILEC's tandem switch. Further, the difficulties that would be involved in AT&T's acquiring the capability of blocking such traffic are signficant.

II. Background

3. U.S. TelePacific, like all CLECs with whom AT&T has not established a voluntary business relationship, does not have a direct-trunking relationship with AT&T. For that reason, all traffic between AT&T and U.S. TelePacific is routed between the two carriers via the tandem switch of the ILEC with whom TelePacific interconnects.

4. Long distance calls originate over this system as follows. When a customer dials a long-distance number, TelePacific receives the call at its switch and routes it to the tandem access switch of the ILEC with whom it interconnects with coding that identifies the traffic as destined for the network of the relevant interexchange carrier. The ILEC receives the traffic at its tandem access switch and then routes it from its tandem access switch to the switch of the relevant interexchange carrier. When the ILEC routes the call from its tandem access switch to the switch of the relevant interexchange carrier, it transports the call over trunk groups

that commingle TelePacific's traffic, the traffic of other CLECs and smaller ILECs, as well as the incumbent LEC's own traffic.

5. In the case of TelePacific and other CLECs who do not have direct trunking to AT&T's network, long distance calls destined for the CLEC's network are terminated as follows. The interexchange carrier routes the call through its network to its network switch serving the terminating destination, and that switch then routes the call to the tandem access switch of the pertinent ILEC. The ILEC's tandem access switch in turn routes the call to the switch of the CLEC serving the called party. The switch of that CLEC then routes the call to the called party.

6. Most CLECs route a wide variety of types of interexchange traffic to AT&T: 1+ traffic, 0+ traffic, dial around traffic (10-10-288+) and 1-8YY traffic destined to subscribers of AT&T's 1-8YY services. I am informed, however, that virtually all of the traffic routed by TelePacific to AT&T consists of 1-8YY traffic. I therefore give special emphasis to this category of traffic in my discussion of AT&T's capability to block originating traffic.

III. AT&T's Network Cannot Block Traffic Routed to AT&T Through An ILEC Tandem Switch On a CLEC-Specific Basis.

7. To understand why AT&T is unable to block tandem-routed originating traffic on a CLEC- or LEC-specific basis, the following three factors must be understood. *First*, because this traffic is tandem-routed, this traffic is transported to AT&T's network and arrives at AT&T's Point of Presence over trunk groups that commingle the undifferentiated traffic of multiple providers of local exchange service. As a consequence, AT&T cannot simply block all traffic from that trunk group as it could if the traffic were delivered to AT&T on a direct-trunked basis.[1] If AT&T were to simply disconnect the trunk, it would simultaneously block not only that

[1] If, by contrast, one were dealing with direct-trunked traffic (*i.e.* traffic transported to AT&T by a CLEC on direct trunk groups that contained only the CLEC's traffic) the situation would be

CLEC's traffic, but also the traffic of the ILEC and of other CLECs from whom AT&T had ordered service. The fact that this traffic is tandem-routed thus means that AT&T must have to have the ability, in real time, to filter out traffic originating from each local exchange carrier.

8. *Second*, virtually all, if not all, areas in the country have implemented Local Number Portability, and this is true of the areas served by TelePacific. Thus, a customer might on one day obtain local service from Pacific Bell, on the next day switch to TelePacific, and on day three switch to a different LEC, all the while retaining the same phone number. Indeed, many of TelePacific's local customers were undoubtedly ported over from the ILEC. The significance of this fact is that an IXC cannot know the identity of the originating access provider based on knowledge of the phone number on which the call originated. Another way of making this point is that phone numbers identify *customers*, they do not identify *carriers*.

9. *Third*, until CLECs started pricing their access services at rates higher than the ILEC's rates, the IXCs had no reason to care about which carrier routed a call to the IXC. While IXCs obviously route calls on the basis of the switch to whom a call is destined, IXCs do not route calls based on the identity of the originating switch – much less the identity of the carrier operating that switch. For this reason, the vendors from whom IXCs buy their equipment have had no reasons to develop software and other equipment that would route or block calls based on the identity of the originating LEC, and AT&T thus does not currently have the ability to block calls on a carrier-specific basis. This is in stark contrast with the situation of the originating CLEC.[2]

---

relatively simple. AT&T could "block" such calls, albeit crudely, simply by disconnecting the trunk group on its switch

[2] In order to provide services to its end users, LECs absolutely have to have, as part of their essential capabilities, the ability to identify the IXC to whom a particular originating long distance call must be routed for completion. As explained in the affidavit of my colleague, Lee

10. Now, in order for AT&T to be able to block the originating tandem-routed traffic of a particular CLEC, two things have to happen: (1) AT&T has to have some way of knowing, reliably and *in real time* – i.e. at or prior to setting up the call – the identity of the LEC that sent the call to AT&T's network. (2) Assuming that AT&T was able to know the identity of the carrier that sent a particular call to AT&T, AT&T would have to have some feasible method for denying access to (*i.e.*, "blocking") that carrier's calls while not blocking the calls of customers of another originating carrier on the trunk group. For ease of analysis, I address each of these issues in turn.

A. AT&T Has No Means Today of Identifying Calls Originated by Customers of One Particular LEC From Calls Delivered by Another LEC Over a Common Trunk Group.

11. There are two potential sources of information by which AT&T could identify the LEC originating a particular call. One source of information is information signaled to AT&T at the time of call set-up. The second potential source of information would be AT&T customer records. Neither source provides AT&T with knowledge that AT&T could use in blocking originating calls on a CLEC-specific basis.

12. **1. Signaling**. At the time a call is handed off by the ILEC tandem switch to AT&T, AT&T receives certain signaling information. For these purposes, only three types of information signaled to AT&T are potentially relevant: (1) the originating phone number; (2) the Jurisdiction Information Parameter (JIP);[3] and (3) the destination phone number. None of these three pieces of information provides AT&T with knowledge of the originating carrier.

Davenport, this same functionality can easily be used to block originating traffic from all phone numbers served by the end office on an IXC-specific basis

[3] While the JIP is expected, it is not always sent in the signaling.

13. **a. Originating Phone Number**. For the reasons stated above, the originating customer's telephone number does not identify the originating local exchange carrier. Accordingly, this information cannot be used to block originating traffic on a real-time basis.

14. **b. Jurisdiction Information Parameter**. The SS7 signaling that the originating end office[4] signals when it originates a call includes an optional parameter which is known as the Jurisdiction Information Parameter. The JIP, where it is provided, is a string of digits that identifies the originating switch routing the call to AT&T. AT&T cannot rely on the JIP for blocking, however, because AT&T often does not receive the JIP of the originating switch on tandem-routed calls, either because the JIP is an optional parameter that the carrier operating the originating end office has chosen not to provision, or because the ILEC tandem has stripped out the originating carrier's JIP in the course of routing the call to AT&T. As a consequence, the JIP cannot be relied upon as a means of blocking originating traffic.

15. Moreover, as I have said, the JIP, even where it is received by AT&T, identifies a switch, it does not in itself identify the carrier operating the switch. Thus, even if the CLEC switch's JIP were passed through to AT&T, before AT&T could use that information to block the CLEC's call AT&T would have to be able to dip into a database that could be queried by a switch in real time, to determine the identity of the carrier that owned the particular originating switch identified by the JIP. No such database, usable for real-time call processing, however, currently exists.[5]

---

[4] Note that not all originating end offices are capable of SS7 signaling and likewise, not all tandem switches provide SS7 signaling. Calls from these switches could not deliver a JIP parameter.

[5] Finally, using the JIP to determine the carrier for the switch itself does not therefore mean that the carrier of the ANI is that same carrier. That is because some CLECs provide service be leasing lines from another CLEC, and connecting PBX-type equipment to that CLEC's end

16. **Destination ANI**. Finally, AT&T also receives the ANI of the terminating phone number. It should be obvious, however, that the ANI of the *terminating* phone number does not identify the *carrier* serving the *originating* caller. The ANI associated with the terminating phone number only provides information about the party being called, and not the CLEC serving the party doing the calling.

17. Consequently, none of the information that AT&T receives through the signaling process informs AT&T of the identity of the local exchange carrier that originated the tandem-routed call.

18. **B. Customer Records**. In addition to the signaling information that is received by AT&T during the call set-up process, AT&T also has in its possession certain customer records for its presubscribed customers that are obtained through a Customer Account Record Exchange with certain LECs. Where those records exist – and AT&T only receives CARE from approximately 70 of 500 CLECs today -- those records include the customer's name, billing address, and phone number, information about the types of calling plans to which the customer is subscribed, and information about the local service provider that presubscribed the customer to AT&T.

19. In my prior testimony in the *MGC* case, I testified that AT&T could in principle use this information to identify calls originated by customers of a particular CLEC so long as those customers are also presubscribed to AT&T. Based upon AT&T's experience in the last 15 months, as well as based on information relevant here that was not relevant in the MGC

---

office. Those CLEC "switches" are hidden to AT&T, and would not be identifiable by use of a JIP or LRN query.

case, I now conclude that AT&T could not reasonably rely on information derived from the CARE process in order to identify the CLEC from which a particular call was routed.

20. First, as exemplified by this very case (but unlike MGC), AT&T does not receive CARE records from many of the CLECs who route traffic to AT&T. Indeed, I am informed that TelePacific has stipulated that it has not supplied AT&T with any individual customer CARE information. Joint Stip., ¶ 29. Where, as here, AT&T does not receive CARE records from the CLEC, AT&T would not have a record identifying the CLEC that was providing service to the customer. In this situation, AT&T's customer records would be of no value for blocking even the calls of customers that had reached AT&T's network through 1+ dialing.

21. Second, even where a CARE record is transmitted to AT&T, that record only informs AT&T of the identity of the local service provider at the time the record is created. Thus, if a customer becomes presubscribed to AT&T by one LEC (for example, Pacific Bell) and then ports over to a CLEC for local service (for example, to TelePacific), unless the CLEC submits supplemental information to AT&T, AT&T's records would generally still show the customer as a customer of the ILEC (Pacific Bell, in this example). Again, this information would not be of use in blocking calls.

22. Third, many larger business customers contract with AT&T directly, and no CARE process is established for such customers. Consequently, the customer could add a location by requesting a particular LEC or CLEC to program its local switch to route traffic to AT&T on a 1+ or other basis without any interaction between the LEC and the IXC, and without AT&T receiving a record that would inform it that the customer is obtaining local phone service from the ILEC or CLEC.

23. Fourth, the exchange of business and billing records between a local service provider and an IXC is not a real-time function. Substantial delays exist between the time a significant action is taken – *e.g.*, the customer subscribes to an IXC – and the time that that information (assuming such information is provided at all by the CLEC, and it is not with respect to TelePacific) is supplied to the IXC. This delay is tolerable for billing purposes, because billing is not a real-time function. This delay is completely intolerable with respect to blocking. A customer identified in AT&T's records as being a customer of a particular CLEC might have its calls blocked well after switching to another CLEC, and the converse.

24. Finally, CARE records, where they exist at all, exist only for presubscribed customers. Here, I am informed that TelePacific has stated that only 2% of its lines are presubscribed to AT&T. Thus, AT&T's business records would not be a useful means of obtaining information for purposes of blocking.

B. Even if AT&T Knew That A Particular Originating Phone Number Was Assigned to A Customer of A Particular CLEC, AT&T's Network Could Not Reasonably Use That Information to Block Calls On A Carrier-Specific Basis.

25. As I explained above, AT&T's network is not currently able to identify in real time the identity of the LEC or CLEC that has routed traffic to AT&T when the traffic is routed to AT&T via an ILEC tandem. In this section, I explain why, even if AT&T did know the identity of the CLEC routing a particular call to its switch, it could not feasibly use that information to block calls on a carrier-specific basis. This difficulty is particularly true with respect to 1-8YY traffic, which I am informed makes up the vast bulk of the originating traffic here at issue.

26. For purposes relevant to the processing and routing of traffic by AT&T, and hence the blocking of traffic, there are four basic types of traffic that must be considered: (1) toll

traffic (both 1+ and dial-around); (2) 0 + ; (3) 1-8YY traffic; and (4) 900 traffic. Although I am informed that TelePacific's originating traffic is virtually exclusively 8YY, in order to understand AT&T's inability to block 8YY traffic on the basis of the originating carrier, it is important to begin by discussing the possibilities with respect to toll and operator traffic.

27. **1+ and dial-around toll traffic**. From the perspective of AT&T's network, a call that is dialed 1 + NPA – NXX –XXXX looks the same, and is processed in the same way, as a call that is dialed 10-10-288-NPA-NXX-XXXX. The dialing prefixes (1+ or 10-10-288) are stripped out at the LEC end office switch and are not passed on to AT&T.[6] Consequently, 1+ calls and dial-around calls are treated by AT&T the same from an engineering perspective.

28. 1+ and dial-around toll calls (that is, calls that will be billed to the originating phone number) are routed by AT&T as follows: When the call is received at the originating AT&T toll switch, the switch will query a network database to determine if the ANI of the originating phone identifies that this customer has subscribed to specific services or has any unique call processing characteristics associated with the account. The ANIs of Subscribers with standard traditional phone service do not get placed into this database. For typical standard calls, call processing will proceed by determining where to route the call based on the destination number, and by determining whether the originating phone's ANI indicates denied service (see ¶ 30 below). These processes proceed simultaneously so that allowed calls will connect through the network with minimal delay (and thus reduced cost associated with access charges). If the query reply to that ANI is determined to be denied service, the switch will terminate the connection process and proceed with final handling of the call attempt (i.e., send the call to a

[6] Although the LEC is technically able when using Feature Group D signaling to signal to the IXC whether the call was a dial-around or a 1+ call, most access providers' tariffs do not provide that service.

termination announcement and disconnect). If the ANI is not denied service, there is no explicit reply of 'allowed' and the call connection process continues uninterrupted. The call completion process performs the function of determining how to route the call. Based on the destination number a terminating switch can be identified by consulting the LNP database which will indicate if the dialed number has been ported to a different terminating switch (a unique switch number) than the first 6 digits (NPA-NXX) of the destination number would indicate for un-ported numbers. The AT&T switch uses the NPA-NXX or its ported-number equivalent to select a trunk-group for which the switch's data tables have been provisioned with these route numbers to transport the call to a terminating AT&T switch which has trunk connectivity to the intended destination number's carrier switch (either directly connected or via an intermediary access tandem provider). The call is routed via this trunk, and the terminating AT&T switch basically performs a completion connection to the designated destination switch.

29. As discussed above, AT&T's network is indifferent as to the identity of the originating *carrier* for purposes of routing a call. For this reason, AT&T has no ability to instruct its network switches to block calls originated by a particular originating switch.

30. However, because long distance calls are billed to the calling party, AT&T has to have a way of protecting itself from callers who build up large outstanding bills that remain unpaid. For this purpose, AT&T has deployed certain network databases that are referred to by AT&T engineers as station screening databases. A station screening database is a network access database that is designed primarily to deny access to customers with unsatisfactory payment histories. This database could be used to instruct the switch not to allow any toll calls originating from a particular originating phone number (station). Because this database is

consulted on each standard-type 1+ call,[7] that database in principle could also be used to block many 1+ calls based on the phone number (ANI) that originated the call.

31. It would be highly impractical, to say the least, for AT&T to use this capability to block calls based on the identity of the originating carrier. To begin with, AT&T would have to know, in real time, each of the phone numbers served by a particular CLEC, and, as discussed above, AT&T does not have that information. *Assuming* that AT&T, however, did have a list of all of the phone numbers served by a CLEC, and even if that list was always up to date (*i.e.* even if customers did not change carriers), AT&T could not feasibly use that information today to block originating toll calls. In order to block a CLEC's toll traffic based on the phone numbers assigned to the CLEC's users, AT&T would have to manually enter each of the CLEC's end users' ANIs, *line-by-line* into the network access database (and remove them from the Service Directory database if they are businesses).[8] Undertaking this task on a line-by-line basis for each of the tens of thousands of access lines served by a particular CLEC – let alone the millions of lines served by CLECs nationwide -- would be prohibitively expensive and impractical. Moreover, if and when a customer of TelePacific decided to change LECs, AT&T would then once again have to reprovision or modify the appropriate information in its database to no longer block calls for that customer's phone number.

32. **0 + Calls**. Operator calls are processed by AT&T roughly as follows: 0+ calls are delivered to AT&T Operator Services switches (these switches are unique both functionally

[7] Business account/subscriber ANIs are not processed against this database since these line numbers are associated with specific service functions and processing that provide additonal features and capabilities. Thus a number denied in this database would not block any use of the AT&T network if that number were designated as a business subscriber's line.

[8] The Service Directory Database is a database that instructs the network as to how to process business customers calls in light of the sophisticated services they order.

and technically from the switches supporting 1+ traffic discussed above) using Feature Group – C (FG-C) Operator Services signaling. These switches can be either directly connected to an End-Office or the connection can be via an Access Tandem. The information signaled includes the originating station's ANI and the destination number, but no explicit information identifying the originating carrier. *See supra* ¶¶ 14-15. When the call arrives at the Operator Switch, a call handling process is initiated for each call. This process will check the ANI against local screening data tables in the switch which identify special service characteristics/restrictions which have been set for individual ANIs. These service characteristics are different than those referred to in the 1+ call processing above. An example of this screening would be an origination phone where high fraud has been identified related to calling card billing. By placing the ANI in the switch's 0+ screening data tables, card billing can be blocked from that station, but collect calls can still be placed. The call handling process will provide either an automated or operator handled protocol that enables the billing method of the call to be established and verified/validated; and if allowed to complete the call to the destination number. Since the originating ANI is not associated with most methods of billing, the Operator Services switches do not consult the network account database referred to above (¶ 30) regarding the allowed account status of this number for the AT&T network since it will not be billed for the call anyway. When it is appropriate to connect the call to the destination number, the Operator Services switch uses the destination number to select a trunk to deliver the call to the 1+ network switch which will then route the call to an AT&T switch that will terminate the call to the appropriate terminating switch (directly or via an access tandem). Note, not only is there no concept of routing based on a carrier, the Operator Switch relies on the 1+ switch to perform all the actual routing and delivery of the call to the destination carrier's switch.

33. Much of what was said above with respect to toll calls applies to 0 + calls. *Assuming* that AT&T knew the particular phone numbers used by a CLEC's customers, it would have to utilize station screening databases that have been deployed to deal with fraudulent calling to block the calls. However, because the purpose of those databases was to deal with fraud and nonpayment, those databases have been designed to screen calls on a line specific basis, not a carrier specific basis. Accordingly, as with 1+ traffic, AT&T would have to manually enter each of the CLEC's end users' ANIs, *line-by-line* into the station-screening database. Undertaking this task on a line-by-line basis for each of the tens of thousands of access lines served by a particular CLEC – let alone the millions of lines served by CLECs nationwide -- would be prohibitively expensive and impractical. Additionally, the Operator Services Switches' screening tables are limited in capacity and would not support a large number of ANI's. Moreover, if and when a customer of TelePacific decided to change LECs, AT&T would then once again have to reprogram its database no longer to block the calls from that customer's phone number.

34. **1-900 Calls**. Briefly, 1-900 calls are processed by AT&T as follows: A 900 call is assigned to an individual carrier based on a 900-NXX specific value. These call are delivered to the designated IXC just as any other 1+ call. The originating AT&T switch will recognize and use the 900 part of the number to identify that a 900-service is being requested. The switch will initiate a call handing process for 900 service which will query a 900-service database that will provide a true destination number to which this call should be connected. Once this true destination number is known, the switch will proceed with connecting to that number, and the simultaneous process for checking the ANI's acceptable billing status will be made.

35. Because 1-900, like toll calls, are billed to the originating phone number, AT&T screens 1-900 calls by consulting the same databases used to screen toll calls. Accordingly, the discussion regarding blocking of toll calls above applies with equal force here.

36. **1-8YY Calls**. 8YY calls are processed as follows: The originating switch upon receiving an 8YY call must either perform the task of identifying the carrier the 8YY number is assigned to, or the originating switch must route all 8YY calls to another carrier's switch which will perform this task for the originating switch. In either case, whichever switch performs this function, a query to one of the industry's 8YY databases will be sent and the 8YY database will return the carrier identity for the number. The switch then routes the 8YY number to that carrier's (IXC's) switch. Again, as in the above call types, this routing could be either via direct connected trunks or the calls could be routed to a tandem switch which will deliver the 8YY call to the carrier along with all other traffic for that carrier. Upon reaching the originating AT&T switch, the 8YY call is recognized as requiring a query to the 8YY database. The database will process the query and depending on the nature of the 8YY service which has been subscribed to, ultimately a destination number will be returned to the originating AT&T switch; this destination number will then be used to route the call to the terminating switch that this destination In a general sense, 8YY call processing is composed of two routing decisions, the first to determine what carrier to route the call to, and the second to determine what destination to route the call to.

37. I am informed that the vast majority of the traffic here at issue is 1-8YY traffic. This is significant from an engineering point of view, because AT&T has no ability whatsoever to block 1-8YY calling as a class based on the originating phone number (let alone the identity of the carrier serving that originating phone number). The reason for this is fairly

simple: unlike the types of calls discussed above, 1-8YY calls are billed to the receiving party, not the originating phone number, and rarely result in fraudulent use. Accordingly, AT&T is utterly indifferent to the identity of the calling party (and thus to the caller's phone number) when it comes to whether to allow the call to route to its assigned destination. AT&T thus has not deployed any station screening databases for 8YY traffic that would be capable of instructing the network not to route 1-8YY calls originating from a particular phone number.[9]

38. Using AT&T's current network capabilities, the only method that AT&T could even theoretically consider using to block 1-8YY traffic based on the originating carrier – and, again, the following discussion assumes, *contrary to fact*, that AT&T would have reliable, real-time knowledge of the particular phone numbers served by a CLEC – would be to utilize the individual account profiles of each advanced-services 8YY number. In order to provide advanced 8YY services, AT&T has the ability to enable its advanced 800 customers to direct how calls originated from a particular location are to be routed. For example, a national mail-order customer might wish to instruct AT&T to route calls originating in the Northeast to a call center in Boston, while calls originating in California would be routed to a call center in Los Angeles. However, most 8YY numbers are not advanced accounts and do not have nor can they use this selective routing function.

39. In order to use this capability, where it exists, to block a CLEC's 8YY traffic, however, AT&T would have to modify each of the *millions* of individual 1-8YY accounts by manually entering in *each* of the millions of individual account profiles instructions not to complete calls from *each* of a CLEC's thousands or tens of thousands of access lines. AT&T would then have to re-modify each of those millions of accounts each time an end user ported to

[9] Thus, even where AT&T has blocked a subscriber as a result of non-payment, that customer

a different local service provider. Even leaving aside the prohibitive implementation costs of performing this task, utilizing the memory that would be required to store such information would threaten the integrity of AT&T's 1-8YY services. Moreover, only a relatively small fraction of AT&T's customers are customers of advanced 8YY services, so for the vast bulk of 8YY customers AT&T could not even utilize the customer profiles to block calls in this way.

C. IT WOULD BE UNDULY EXPENSIVE AND TIME-CONSUMING TO REQUIRE AT&T TO DEVELOP THE CAPABILITY FEASIBLY AND RELIABLY TO BLOCK ORIGINATING TANDEM-ROUTED TRAFFIC ON A CLEC-SPECIFIC BASIS.

40. In order for AT&T to block tandem-routed originating traffic on a CLEC-specific basis, AT&T would have to alter its network in two principal ways:

41. First, AT&T would have to maintain one or more databases that could be queried, in real time, to identify both (1) the identity of the switch that routed the call to AT&T; and (2) the identity of the carrier that owned the particular originating switch. While the industry-wide Local Number Portability Database, of which AT&T maintains a copy, would provide the first type of information (*i.e.* the identity of the switch serving a particular phone number), some other database would have to be deployed by AT&T to address the second inquiry: the identity of the carrier operating that switch.

42. Second, and perhaps more fundamentally, AT&T would have to significantly alter the manner in which it processes calls and begins routing calls based on the identity of the *originating* switch. This would mean creating a system whereby every type of call routed to AT&T, regardless of the type of customer or of the service would be delayed at the originating network switch and a determination would have to be made as to whether the call should be

---

would still be able to place 8YY calls.

denied on the basis of the identity of the originating carrier determined by appropriately modified and deployed databases.

43. A simple perspective on what would be required to enable the AT&T network to block calls delivered to our network switches when they originate from a specific CLEC/local access carrier would entail the following. An essential requirement to blocking a designated carrier is that the identity (and recognition of that identity) must be known to the call processing system(s) managing the call within a carrier's network. For AT&T, this means that since the carrier's identity will not be delivered directly with the call's signaling information, that other information that is provided in signaled information will have to be used by the call processing system to derive the carrier's identity. AT&T needs to create a new process that can use available/provided information to retrieve the desired information. This new AT&T function (required in each of our different brands of network switches) would have to query the LNP database with the call's ANI to obtain the ANI's originating switch's unique identity, and then in turn use this information to derive the owning carrier's identity via a data relationship maintained in some system/data-base. Thus each time a call arrives at an AT&T switch, this new processing function would be performed; and based on the result of the function, call-processing would determine that the call would be allowed or denied (i.e., routed or terminated appropriate). This new function requires development not only in the switches themselves, but also in some system, which will provide the data relationship between a switch's unique identity and its owner. Further, since the new function requires that there be a new data relationship that it can access, there must therefore be an administrative and operations support process and system that is used to maintain and administer the data itself. This support process (which does not exist) must be able to add, update, and remove switch and carrier relationships; there must be a process to

specify whether the business relationship that results from querying this data would allow or would block the call; and the system/process needs to be prepared to handle data inconsistencies, irregularities, and incomplete information. To perform this task requires a completely designed, developed and operationalized set of systems, processes, and organizations to conduct all the daily tasks required to deliver this information in real-time to network switches handling traffic from a continuously changing industry environment.

44. I estimate that it would cost AT&T approximately 25 to 35 million dollars to undertake the development work necessary to acquire the ability to identify and block tandem-routed traffic on a CLEC-specific basis and to deploy that capability throughout the network; that the network costs to AT&T of then using those systems would be between 5 and 10 million dollars annually; and that the operational costs of the organization that would be necessary to perform the functions of maintaining and entering the data associated with blocking would be between 1 and 2 million dollars annually. I futher estimate that it would take AT&T's vendors approximately 2 years to deliver the modified systems to AT&T.

45. By contrast, as discussed in the affidavit of my colleague Sekar Ganesan, a switched based CLEC today, can, using existing software and hardware capabilities that it already utilizes as part of its normal operations, instruct its switch not to route any calls from a particular end office to a particular IXC.

IV. AT&T's Network Cannot Feasibly Block Terminating Traffic On a CLEC-Specific Basis.

46. AT&T's network likewise cannot presently block terminating traffic on a CLEC-specific basis. However, the problem of blocking terminating traffic is more easily solved by AT&T than the problem of blocking originating traffic.

47. Unlike originating traffic, which is subject to different processing and routing protocols depending on the particular service (*i.e.*, is the call toll or toll-free, or operator), all terminating traffic is routed by AT&T in the same way. In particular, the AT&T switch that receives the call from the originating access provider examines the first six digits of the dialed number (the area code and exchange, NPA-NXX) to determine whether the geographic area to which that call is destined has implemented number portability.[10] Assuming a number portability environment exists in the area for which the call is destined (which is usually the case), AT&T's switch then dips into a copy of the Local Number Portability (LNP) database to determine the identity of the end office switch that would terminate the call. AT&T's switch then consults a routing table that is maintained by AT&T based on information included in the industry-wide Local Exchange Routing Guide (LERG), and routes the call to the appropriate switch. Where the terminating end office switch is behind a tandem, AT&T's switch routes the call to the appropriate tandem switch. The tandem switch then routes the call to the appropriate end office based on the destination phone number.

48. Because AT&T dips its copy of the LNP database in routing every call, AT&T's network knows the identity of both the tandam and end office switch to which a call is destined at the time it sets up the call. As discussed above, however, the LNP database identifies only the identity (or the "location") of the switch. The LNP database does not identify the owner of the switch, that is the carrier that is operating the switch. Indeed, while there exist various ways (for example, electronic copies of the LERG) in which AT&T could look up a switch's identifier code as returned by the LNP database and find out the identity of the carrier operating the switch. To the best of my knowledge there is no database today that contains that

[10] In those few areas where number portability has not been implemented, the NPA-NXX (area

information and that is capable of being queried by an AT&T switch in order to enable the switch to make a real-time routing decision.

49. As a result, AT&T would have to modify its network in order to enable it to block tandem-routed terminating traffic. In particular, AT&T would have to deploy and populate a database capable of being queried in real-time by one its network switches that would determine the identity of the carrier operating a particular end office switch. AT&T would then have to program its switches to query that database on each call. Having determined the identity of the terminating carrier, the switch would then have to be programmed to look up in a specially created table whether the terminating carrier is one with whom AT&T does not have an access arrangement. If AT&T does not have a business relationship with the terminating carrier, the AT&T switch would then be instructed to route the call to an appropriate announcement instead of to the terminating switch. All of these steps require development work, because the appropriate databases and call-processing protocols do not currently exist in AT&T's network.

50. By contrast, although the terminating end office provider (here, TelePacific) is not technically capable of blocking terminating interexchange traffic on the basis of the identity of the IXC, the CLEC could request the ILEC tandem provider with whom it interconnects to block AT&T terminating calls. Specifically, it is my opinion that the ILEC tandem provider is capable today, without development work, of instructing its switch not to route any calls arriving at the switch from the incoming AT&T trunk groups to the outbound trunk groups of the CLEC subtending end office.

51. I estimate that it would cost AT&T between $1 and $2 million to develop the necessary network modifications to enable AT&T to block terminating traffic on a CLEC-

---

code and exchange) would themselves identify the terminating switch.

specific basis, that it would cost AT&T an additional $2 million to $4 million to deploy the necessary support systems, and that it would then cost an additional $1 million a year for AT&T to administer and implement the necessary modifications.

I swear, under penalty of perjury under the laws of the United States of America, that the foregoing is true and correct.

T. Michael Bauer

Dated: September 15, 2000

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
U.S. TelePacific Corp.,	)	
	)	
Complainant,	)	
	)	**File No. EB-00-MD-010**
v.	)	
	)	
AT&T Corp.	)	
	)	
Defendant.	)	

AFFIDAVIT OF SEKAR GANESAN

1. My name is Sekar Ganesan. My business address is 200 Laurel Avenue, Room E33D25, Middletown, NJ 07748. I am employed by AT&T Corp. ("AT&T") as a District Manager, Network Routing and Numbering Planning. I have been employed by AT&T as a network engineer since 1988. I have a Master's Degree in Mechanical Engineering and a Ph.D. in Systems Science from the University of Houston. I have obtained 2 patents during my work as an engineer for AT&T. In my present position I am responsible for network planning associated with numbering and number translations, intra- and inter-network routing and routing translations, for AT&T services. In that capacity, I have knowledge as to the capabilities of various local end office switches, including as it pertains to the routing or blocking of traffic from an end office on an inter-exchange carrier-specific basis.

Purpose and Summary of Affidavit

2. This affidavit is submitted on behalf of AT&T in response to the Commission's request for affidavits addressing the question on whom the obligation reasonably should rest to block the traffic flow between a competitive local exchange carrier ("CLEC") and

an interexchange carrier ("IXC") where the IXC has not ordered access services from the CLEC or has cancelled an existing order. The purpose of this affidavit, therefore, is to address two issues relevant to the blocking of originating traffic. First, this affidavit will demonstrate that the routing of traffic from a CLEC to an IXC, whether routed through an access tandem or not, results from deliberate and affirmative provisioning actions[1] taken by the CLEC, without participation by the IXC. If the CLEC does not take these explicit steps, no originating traffic would route to the IXC in the first place. Second, it is very clear that a switch-based CLEC could easily cease routing traffic to an IXC, on an end-office by end-office basis, using existing software and hardware capabilities, and without having to undertake provisioning work that is materially different in kind or degree from the types of provisioning tasks that the CLEC must routinely do as part of its business when deploying its switch or adding or deleting new IXCs.

Background

3. The following kinds of calls are routed to IXCs by local exchange carriers ("LECs"):

- IntraLATA toll calls
- InterLATA toll calls
- Toll-free (e.g. 800) calls
- Service Access Codes: 900 calls, 500 calls

4. As set forth above, LECs such as the incumbent Local Exchange Carriers (ILECs), or the Competitive Local Exchange Carriers (CLECs), must take explicit action -- i.e. provision specific data structures (*i.e.* screens) in their switches -- to route traffic to a long distance carrier. (In addition, of course, for tandem-routed traffic they must also deploy trunks

[1] Provisioning is the term used to describe the input of data to switches--data necessary for the switches to provide required service.

between their switch and the ILEC's access tandem switch.) In the absence of this data provisioning, calls destined for a given carrier will fail to complete.

5. I am informed that the complainant in this case, U.S. TelePacific ("TelePacific"), has stipulated that it utilizes the Lucent 5ESS (tm) local switch. The provisioning work discussed in this affidavit is thus described in terms of how it would be carried out for a Lucent 5ESS (tm) – 2000 digital switch – the dominant local switch in the United States. This description, however, is generally applicable to the provisioning of other vendors' switches.

Routing Calls To Interexchange Carriers

6. The Lucent 5ESS switch (tm) is not pre-provisioned "out of the box" to route traffic to any IXC, including to AT&T. Instead, the switch must be provisioned to route traffic to each IXC to whom the CLEC has deliberately chosen to route traffic. This deliberate action is done as follows.

7. For every IXC to be supported at an End Office (EO) that provides local service, data provisioning of the Recent Change/Verify (RC/V) view 10.3 is required. This view, which consists of a series of 5 screens, is used to define the characteristics of a particular IXC. A copy of the 5 user screens that make up this view, for the Software Release 5E14[2], is attached as Exhibit A. In addition to these screens, two additional views must be provisioned to route traffic properly to an IXC: (1) RC/V 9.3, entitled "Local Digit (Office Dialing)" (screens 1 and 2 of 5 are attached hereto as Exhibit B); and (2) RC/V 10.10, entitled Screening (Charging) (attached hereto as Exhibit C).

[2] Previous Software Releases require similar provisioning.

8. The information populated in these fields controls the routing of calls to the particular interexchange carrier. (Which fields are used depends on the type of traffic at issue) That is, *inter alia*, the information specified in these fields will instruct the switch as to the routing used to transport the call, as well as instruct the switch as to the particular coding to send up with the call to the tandem switch that will instruct the tandem switch that the call is destined for a particular interexchange carrier.

9. Thus, in order to route calls to an IXC, the LEC or CLEC must affirmatively fill out these routine screens. As stated, none of these screens are pre-provisioned by Lucent. If the CLEC does not fill out these screens in the first place for a particular IXC, no traffic would route to that IXC. All a CLEC has to do to block originating traffic, therefore, regardless of whether it is direct- or tandem-trunked, is either to leave these screens blank, or, if those views were initially provisioned, to delete the entries. Any CLEC that is capable of using its switch to route traffic to an IXC, is capable of blocking traffic to that IXC as well.

8YY Traffic

10. For these calls – which I am informed make up the bulk of the calling at issue in this case -- an industry Toll-Free Data Base determines who the provider of the 8yy[3] service is. Normally, an End Office (EO) will query this data base to determine who the IXC is when such a number is dialed.[4] In response to the query, the toll-free database will return a

[3] 8yy numbers are those where the "yy" stands for equal digits. So, for example, 888, 877, 866 are toll-free numbers described by the term "8yy".

[4] I am informed that TelePacific has stipulated that it technically can block originating traffic to AT&T, Joint Stips. ¶ 27, and that its tariff states that "[w]hen a 1+800+NXX-NXXX type call is originated by an end user, [TelePacific] will utilize the SS7 network to query an 800 database to identify the [IXC] to whom the call will be delivered." TelePacific Tariff FCC No. 1, § 2.5. From this information I infer that TelePacific, like most carriers, has chosen to do its own database dips.

Carrier ID (e.g. 0288) and the same 800 number. The EO will use the content of the 10.3 described above, fields 27 and 28, to route the call. *See* Exhibit A.

11. As described above, if the local carrier wishes to block 8YY traffic to a particular IXC, the carrier would simply never provision the RC/V 10.3, or would provision the carrier to point to an appropriate announcement. It is therefore a straightforward matter for an LEC to cease routing 1-8YY traffic to a particular IXC.

12. It is theoretically possible for a CLEC to pay another carrier such as an ILEC to query the ITFDB for Toll-free calls, rather than dipping the database itself. Although I do not have reason to believe this is true of TelePacific, *see* n. 4, where a CLEC does pay the tandem provider to dip the database process its 1-8YY traffic, the process of blocking that traffic would be more complicated.

13. As an initial matter, however, from an engineering point of view this difficulty is not a technical one. There is no technical reason whatsoever that would prevent a switched based CLEC from doing its own toll free data base dips, and as discussed above, this is the dominant practice in the industry. In situations where the CLEC has chosen to have the ILEC dip the database at the tandem, therefore, the CLEC can solve the problem of blocking very easily by simply choosing to do the dips itself. The decision not to do so is a business one, not a technical one.

14. Even where the CLEC arranges with the ILEC to query the database, there is no reason why the local carrier would not be able, at a minimum, to block all access to 8YY numbers used as access to the carrier, such as 1-800-CALL-ATT. This blocking would be carried out in digit analysis, using a RC/V view 9.9, RDIT, which provides exception processing for any particular dialed number. Since no database query is required to effectuate this type of blocking,

there is no impediment to a CLEC blocking such calls whether or not it queries the toll-free database itself.

15. Moreover, a CLEC that has chosen to contract with the tandem provider to query the 1-8YY database could arrange to have that ILEC block the 1-8YY traffic of a particular IXC at the tandem. Because the CLEC routes its traffic to the tandem on a dedicated trunk group, and because the tandem routes traffic to the IXCs on dedicated trunk groups, the tandem provider is technically able, with no development necessary, to instruct the tandem not to route calls from a particular CLEC to a particular IXC. An explanation of the method that that ILEC would utilize to block such traffic is set forth in Exhibit D.

The Provisioning Of An Appropriate Announcement

16. As set forth above, in order to block calls to an IXC, all the CLEC has to do is to leave particular fields blank in the screens described above. Where an interexchange call is destined for a particular carrier not provisioned in the 10.3, for instance in the case when dial around (1010345) is used, then the switch will automatically provide an announcement, using the content of the RC/V 10.1 (Fixed Route) view. The Fixed Route view is usually provided by Lucent in default format with a new switch. Carriers usually elaborate on that view to assure informative announcements in various error conditions. A view of that screen is set forth as Exhibit E.

17. Alternatively, a CLEC that wishes to block originating traffic to an IXC could utilize the 10.3 view to instruct the switch that all calls destined for a particular IXC would be routed to a customized announcement.

18. In this regard, it is important to point out that the Lucent 5ESS switch is easily capable of generating an appropriate "customized" announcement to reflect the absence of an access agreement with the IXC. That is, rather than utilizing a generic "your call cannot be completed as dialed. Please check the number and try again" type announcement – which would be uninformative and would frustrate callers by encouraging them to dial again – the LEC can, using the 10.3 view or the 10.1 view, along with appropriate recorded content in an announcement frame on the switch, direct a particular IXC's call to an appropriate announcement that would inform the caller that the call cannot be completed due to the absence of a business relationship between the LEC and the IXC.

Provisioning/Implementation Burdens

19. Finally, I am informed that TelePacific intends to argue that it would be burdensome from an implementation point of view to cease routing originating traffic to AT&T. I disagree. Populating each of the views described above (such as the 10.3 carrier definition or the 9.3 view) is a function that the LEC must perform as part of its routine business operations. Indeed, if TelePacific is routing calls to AT&T using its 5ESS switch, this means that it had, at one point, to populate each of the fields discussed above. At that point in time, it would have taken virtually no additional work (other than the selection of an appropriate announcement) for TelePacific to have instructed the switch to route AT&T- bound traffic to an announcement rather than to TelePacific's tandem-bound trunk groups.

20. Moreover, all LECs are required to update these views as part of the LECs routine business operation as particular IXCs go out of business or begin providing service in a region. For example, CLECs in New York who wished to make Bell Atlantic's long-distance services and Bell-Atlantic owned 1-8YY numbers available to their customers following Bell

Atlantic's 271 approval in New York would have had to take all of the explicit actions discussed above to enable the traffic to route properly. Another common situation is the proliferation of new dial-around services, such as 10-10-321 or 10-10-345. As these services are introduced, as well as when they are withdrawn, the CLEC must take the explicit actions described above to route, and then to deny routing, to these new IXC offerings.

I swear, under penalty of perjury under the laws of the United States of America, that the foregoing is true and correct.

Sekar Ganesan

Dated: September 15, 2000

EXHIBIT A

5ESS SWITCH
SCREEN 1 OF 5 RECENT CHANGE 10.3
(5305) CARRIER ADMINISTRATION

*1. CARRIER ID ____ FEATURE GROUP B ONLY (Below)
*2. FEAT GRP _ 12. FGB CDI ____
#3. ACCESS TYPE _____ 13. FGB RTI _____
4. LONG REC _ 14. TRANS CARRIER ___
5. MEASUREMENT _
6. DIG ROUTING _
7. LEC SERVICE _
9. CARRIER NAME _____
10. SEND ANI II _
11. REMARKS _____

5ESS SWITCH
SCREEN 2 OF 5 RECENT CHANGE 10.3
(5305) CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

15. CARRIER TYPE _____ 26. ASP TRIG NBR ___ 37. INTL OP CDI ____
16. INTRA LATA _ 27. DOMES CDI ____ 38. INTL OP RTI _____
17. CI CUT _ 28. DOMES RTI _____ 39. NS CDI ____
18. OVERLAP _ 29. INTL CDI ____ 40. NS RTI _____
19. SAC OVERLAP _ 30. INTL RTI _____ 41. ASP CDI ____
20. CAC SCRNING _ 31. ZMINUS CDI ____ 42. ASP RTI _____
21. SCD SCRNING _ 32. ZMINUS RTI _____ 43. ASP TF CDI ____
22. SENT PAID OVLAP _ 33. CI CUT CDI ____ 44. ASP TF RTI _____
23. AC ICLATA OVR _ 34. CI CUT RTI _____ 45. OFC OBL INH _
24. ZPLUS OPT _ 35. ZPLUS CDI ____ 46. OFC ONA INH _
25. ZMINUS OPT _ 36. ZPLUS RTI _____

5ESS SWITCH
SCREEN 3 OF 5 RECENT CHANGE 10.3
(5305) CARRIER ADMINISTRATION (FEATURE GROUP D ONLY - PLC)

PRESUB LOCAL CARRIER (0-) PRESUB LOCAL CARRIER (NONE+/1+)
>47. OPER MINUS CDI ____ >53. INTRASWITCH _
48. OPER MINUS RTI _____ 54. NORMAL CDI ____
49. OPER MINUS SIGNAL ___ 55. NORMAL RTI _____
56. NORMAL SIGNAL ___
PRESUB LOCAL CARRIER (0+)
>50. OPER PLUS CDI ____ PRESUB LOCAL CARRIER (LOCDA)
51. OPER PLUS RTI _____ >57. LOCDA CDI ____
52. OPER PLUS SIGNAL ___ 58. LOCDA RTI _____
59. LOCDA SIGNAL ___
60. LOCDA CONV DN _____

5ESS SWITCH
SCREEN 4 OF 5 RECENT CHANGE 10.3
(5305) CARRIER ADMINISTRATION (FEATURE GROUP D ONLY - PLC)

PRESUB LOCAL CARRIER (DA) PRESUB LOCAL CARRIER (BUSOFC)
>61. DA CDI ____ >69. BUSOFC CDI ____
62. DA RTI _____ 70. BUSOFC RTI _____
63. DA SIGNAL ___ 71. BUSOFC SIGNAL ___
64. DA CONV DN _____ 72. BUSOFC CONV DN _____

PRESUB LOCAL CARRIER (REPAIR)
>65. REPAIR CDI ____
66. REPAIR RTI _____
67. REPAIR SIGNAL ___
68. REPAIR CONV DN _____

5ESS SWITCH
SCREEN 5 OF 5 RECENT CHANGE 10.3
(5305) CARRIER ADMINISTRATION (FEATURE GROUP D ONLY)

TANDEM CUT
>73. TANDEM CUT _
74. TANDEM CUT CDI ____
75. TANDEM CUT RTI _____

ANI II SUBSCRIPTION
>81. TOLLFREE II _
82. DEFAULT II _

83. CRIT IND _

EXHIBIT B

5ESS SWITCH

SCREEN 1 OF 5 RECENT CHANGE 9.3

(53003,53005) LOCAL DIGIT (OFFICE DIALING)

*1. LDIT ___ 15. DESEP ___

*2. INCOMING DIGITS _____ 16. PREFIX ____

3. CALL TYPE _____ 17. WZ1 REGION _

5. TYP CI CALL _____ 18. SAC OWNER ____

7. RTI _____ 19. NATURE OF NBR ____

8. POLYGRD _ 20. TRIG NBR ___

9. NPA ___ 21. ESC CODE _

10. OFFCOD ___ 22. DFLT RT ____

11. TERM LATA __ 23. INH OBL _

12. NBR OF DIGITS __ 24. INH ONA _

13. RDIT ___ 25. ANI BYPASS _

14. CODE INDEX ____ 26. RMK _____

5ESS SWITCH

SCREEN 2 OF 5 RECENT CHANGE 9.3

(53003,53005) LOCAL DIGIT (OFFICE DIALING)

27. NPA SPLIT ANNC _ LOCAL NUMBER PORTABILITY 37. NODAL IDX _

31. LNP TRIG NBR ___ 38. DN PREFD _

28. IMPLIED NPAS (IMPLDNPAS.I) 32. GEO PORT _ 39. GETS HPC _

ROW	PREFIX	NPA		
1	___	___	33. PORTED IN _	40. DENY XFER _
2	___	___	34. HOME LRN _	41. REL LINK _
3	___	___	35. LRN SCREENING _	
			36. INH DNT _	

EXHIBIT E

5ESS SWITCH

RECENT CHANGE 10.1

(53011) FIXED ROUTE (ROUTING)

*1. TRMT _____

2. TONE _

3. TONE TYPE _____

4. RTI ____

5. CHGI ___

6. PLAY ANNC _

EXHIBIT C

The Recent Change Screening (Charging) view (10.10) is used to define the routing and charging for every valid code index (CDI) and screen index (SCR) combination in the switch. In particular, calls that are carrier-routed may be assigned a CDI specific for the carrier, and will receive the SCR value from the caller's data.

5ESS SWITCH

RECENT CHANGE 10.10

(5301) SCREENING (CHARGING)

*1. SCR ____

*2. CDI ____

3. SCREENING DATA (SCRNDATA)

ROW PFX NPA OFFCOD RTI CHGI TDV CST IECR CBLK CONF

1 ____ ___ ___ _____ _____ ____ ____ - - _____

2 ____ ___ ___ _____ _____ ____ ____ - - _____

3 ____ ___ ___ _____ _____ ____ ____ - - _____

20. RMK _____

EXHIBIT D

The ILEC could use the RC/V view 9.3,[5] shown above, to give a distinctive CDI (Code Destination Index to 8yy calls from this CLEC. Then, with appropriate business arrangements made by the CLEC, the ILEC could change the provisioning in the RC/V 10.3, in the tandem, to force all 8yy calls with that CDI to route to an announcement. In particular, field 6, <DIG ROUTING> , for carrier=0288, must be set to <Y>. Then, additional data must be provisioned by the ILEC in RC/V view 9.7 CDIM. The Carrier Destination (Office Dialing) view (9.7) is used for defining the carrier destination index used in the routing of an inter-LATA call when the 5ESS® switch serves as an Access Tandem. This view is shown below.

5ESS SWITCH

RECENT CHANGE 9.7

(53006) CARRIER DESTINATION (OFFICE DIALING)

*1. CODE INDEX ___nnn(special for CLEC)_

*2. CARRIER ID __0288 (AT&T)__

*3. FEAT GRP _D

#4. CARRIER CDI __mmm (could be same as field 1, or could be an existing CDI used to block unwanted calls by the ILEC)__

#5. CARRIER RTI __pppp___(blocking RTI)

6. REMARKS _____

This view, when provisioned similar to the illustration, will serve to block 8yy calls from the CLEC to AT&T.

[5] These specific descriptions assume that the ILEC's tandem is a Lucent #5ESS (tm) switch, as many tandems are.